

BEST AVAILABLE COPYAttorney's Docket: HOE96/HO15JSerial No.: 08/994.479Art Unit 1751Response to Office Action Mailed December 14, 2006**REMARKS**

The Office Action mailed December 14, 2006 has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. Accordingly, reconsideration of the present Application in view of the following remarks is respectfully requested.

In the information disclosure statement filed September 19, 2000, one of the references was incorrectly listed as WO92/003525 and should have been listed as WO92/03525. Applicant apologizes for the inconvenience caused by this error.

Applicant has amended the Application to more clearly recite what Applicant believes to be the invention. Claims 1 and 5 were amended to more clearly recite that the ingredient consists of a reaction product which is obtained by depositing a solution of an acidic polycarboxylate onto an alkaline silicate and drying. Claim 23 was amended to more clearly recite the above processing steps to provide a dry reaction product and the dry reaction product is combined with other components. Support for these amendments may be found in originally filed claims 1 and 11 and claim 16. These amendments are fully supported by the Specification and the originally filed claims. It is believed that no new matter has been introduced and that no new search is required.

Applicant's invention relates to the discovery that pulverulent detergents and cleaning detergents can be improved by the use of a dry ingredient which is produced by depositing a solution of an acidic polycarboxylate onto an alkaline silicate and subsequently drying the ingredient. When the ingredient of the present invention is incorporated into detergent preparations, significant reduction in ash production results. In Applicant's Specification at page 19, Table 3 presents a side-by-side comparison of detergents containing conventional components (Examples 4 and 5) with detergents containing the inventive ingredient prepared as recited in amended claim 1 (Examples 6 and 7). In Table 3, ash deposits on five standard fabrics are shown after 25 washes. The inorganic ash deposits were determined by incinerating the standard fabric. It is clear from the data shown in Table 3 that the individual and the average incrustation values of the pulverulent laundry detergents

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comprising the novel ingredient of the instant invention resulted in significantly lower incrustation values. (Table 3 is reproduced hereinbelow.)

Table 3: Fabric Incrustation (% Ash)

	% Ash After 25 Washes			
	Example 4	Example 6	Example 5	Example 7
Terry (Vossen)	2.71	1.12	2.38	2.08
Cotton (Empa)	1.84	0.97	2.05	1.41
Cotton (WFK)	3.93	3.51	4.80	3.91
PE/Co (WFK)	2.04	0.96	2.03	1.31
Double rib (WFK)	1.79	0.78	1.51	1.41
Average Value	2.46	1.47	2.55	2.02

Claims 1-16 and 23-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilkinson, US Patent No. 5,736,502, hereinafter referred to as the '502 Patent. The rejection of claim 1 as amended under 35 U.S.C. §103(a) as being unpatentable over Wilkinson, US Patent No. 5,736,502 should be withdrawn for the reason that the '502 Patent teaches away from Applicant's invention, which is an ingredient consisting of an alkali silicate and an acidic polycarboxylate. The '502 Patent discloses granular detergent compositions which are prepared by mixing a polyacrylate in solution with a spray dried powder which was prepared from large number of other ingredients, not including layered silicate, see column 11, Example 3 and lines 25-33. The layered silicate is combined together with further components in a second step. Thus, the '502 Patent fails to disclose any ingredients of the detergent which are obtained by disposing a polyacrylate or polycarboxylate solution directly on a layered silicate and subsequently drying the ingredient. Furthermore, Applicant has shown evidence of unexpected results when Applicant's dry ingredient consisting of polycarboxylate and silicate is mixed with other detergent ingredients compared to detergents in which all of the ingredients are mixed without Applicant's separate processing step. Clearly, the '502 Patent is directed to a detergent which is formed in the absence of an ingredient obtained as defined in the instant invention.

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Thus, the '502 Patent teaches away from applicant's invention and provides no motivation to anyone skilled in the art to separately combine the acidic polycarboxylate with silicate prior to any combination with additional detergent components. Furthermore, there is nothing in the '502 Patent to teach or suggest the method for obtaining Applicant's novel ingredient or the desirability for combining that ingredient with other detergent components. A combination is not obvious unless the art teaches the desirability of the combination. Obvious to try is not the standard of 35 U.S.C. §103. No one skilled in the art would be motivated by the '502 Patent to arrive at Applicant's ingredient. Disregard for the unobviousness of the results of obvious to try experiments disregards the "invention as a whole" concept of §103. Obviousness is not determined by the application of hindsight or retrospect, with the knowledge of the Applicant's discovery. Rather it is determined as of the time of the invention, based solely on the knowledge disclosed by the prior art as a whole. Therefore, the rejection of claim 1, as amended under 35 USC § 103(a) as being unpatentable over US Patent 5,736,502 should be withdrawn for the reason that the '502 patent teaches away from Applicant's invention and further in view of Applicant's showing of unexpected advantages of Applicant's invention.

The rejection of claims 2-16 and 23-27 as amended under 35 USC § 102(e) as being anticipated by US Patent 5,736,502 should be withdrawn for the reasons given in support of claim 1 from which they depend.

Claims 1-16, and 23-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Goldstein, US Patent No. 5,663,133 ('133 Patent). The rejection of claim 1, as amended under 35 U.S.C. §103(a) as being unpatentable over Goldstein, US Patent No. 5,663,133, should be withdrawn for the reason that the '133 patent teaches away from Applicant's invention. In column 26, Example III of the '133 Patent discloses an automatic dishwashing detergent having 17% silicate and 6% polyacrylate polymer and other components. In all of the examples, the detergents are prepared exactly the same except that the nonionic surfactant is first mixed with the solid benzoyl peroxide particle and then added to the other ingredients, or the nonionic surfactant is added to the other ingredients without the benzoyl peroxide. The Example III disclosed in column 26 of the '133 patent is at

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best silent, and in fact teaches away from any solution of an acidic polycarboxylate being added to a layered silicate and drying. The '133 Patent fails to disclose any ingredients of the detergent which are obtained by disposing a polyacrylate or polycarboxylate solution directly on a layered silicate and subsequently drying the ingredient. Furthermore, Applicant has shown evidence of unexpected results when Applicant's dry ingredient consisting of the acidic polycarboxylate and silicate is mixed with other detergent ingredients compared to detergents in which all of the ingredients are mixed without Applicant's separate processing step. Clearly, the '133 Patent is directed to a detergent which is formed in the absence of an ingredient obtained as defined in the instant invention and can not provide any motivation to one skilled in the art to prepare detergents comprising the novel ingredient obtained by contacting a layered silicate with a polycarboxylate solution and subsequently drying. Furthermore, there is nothing in the '133 Patent to teach or suggest the method for obtaining applicant's novel ingredient or the desirability for combining that ingredient with other detergent components. A combination is not obvious unless the art teaches the desirability of the combination. Obvious to try is not the standard of 35 U.S.C. §103. No one skilled in the art would be motivated by the '133 Patent to arrive at Applicant's compound. Disregard for the unobviousness of the results of obvious to try experiments disregards the "invention as a whole" concept of §103. Obviousness is not determined by the application of hindsight or retrospect, with the knowledge of the Applicant's discovery. Rather it is determined as of the time of the invention, based solely on the knowledge disclosed by the prior art as a whole. Therefore, the rejection of claim 1, as amended under 35 USC § 103(a) as being unpatentable over US Patent 5,663,133 should be withdrawn for the reason that the '133 Patent teaches away from Applicant's invention and in view of Applicant's showing of unexpected benefits.

The rejection of claims 2-16 as amended under 35 USC § 103(a) as being unpatentable over US Patent 5,663,133 should be withdrawn for the reasons given in support of claim 1 from which they depend.

The rejection of claims 23 and its dependencies claims 24, 26 and 27, as amended under 35 USC § 103(a) as being anticipated by US Patent 5,663,133

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should be withdrawn for the reasons given in support of claim 1, and for the reason that nowhere in the '133 Patent is there disclosed a process for using a pulverulent laundry and cleaning detergent ingredient which consists of an acidic polycarboxylate which is deposited onto an alkaline silicate and dried.

Claims 1-16 and 23-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Baillelly et al. (U.S. Patent No. 5,773,400), herein referred to as the '400 Patent. The rejection of claim 1 as amended under 35 U.S.C. § 103(a) as being unpatentable over Baillelly et al. (U.S. Patent No. 5,773,400) should be withdrawn for the reason that the '400 Patent teaches away from Applicant's invention and no one skilled in the art would be motivated to achieve applicant's unexpected results from the disclosure of the '400 Patent. The '400 patent discloses particulate compositions which are composed of layered silicate and a binder and in addition comprise a water insoluble material (See column 24, lines 26-34). The '400 Patent discloses the dry mixing and compacting of ingredients in the absence of substantial amounts of water, as indicated by the disclosure that the composition contains less than 5% of moisture. The '400 does not disclose applicant's ingredient which consists of an acidic polycarboxylate disposed on a silicate which was obtained by contacting the silicate with an aqueous solution of the acidic polycarboxylate and subsequently drying the ingredient, and the '400 Patent is silent any unexpected benefit in reduced incrustation in using a detergent having an ingredient which is obtained according to amended claim 1 of the subject application. Although the '400 Patent discloses detergent compositions prepared by mixing 10% crystalline layered silicate and 4% acrylic/maleic acid copolymer as well as surfactants, and other conventional detergent components, none of the components are obtained according to the instant invention. Irrespective of whether the copolymer is introduced as a solid or a liquid, as disclosed in lines 53-59, solid agglomerates which do not contain any silicate are produced following the introduction of the copolymer; and, in a second step, the thus produced solid agglomerates are combined with other ingredients, including the layered silicate. Thus, there is no teaching or suggestion in the '400 Patent that the acrylic/maleic acid copolymers combined directly with any type of silicate, and particularly no

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teaching or suggestion that a solution of the acrylic/maleic acid copolymer is deposited on the silicate and dried, prior to any combination of the obtained ingredient with any other detergent components. Applicant has demonstrated unexpected benefits for a combination of Applicant's novel detergent ingredient which was obtained by depositing a solution of the acrylic/maleic acid copolymer is deposited on the silicate and dried. Applicant's examples as shown in Table 3 of Applicant's Specification and discussed herein above clearly showed that significant difference in performance were provided by Applicant's materials, even when the chemical composition and the coating rate were identical and the granules only differed by Applicant's deposition and drying step. Such results were clearly unexpected and not suggested to anyone skilled in the art by the broad disclosure of the '400 Patent. Furthermore, there is nothing in the '400 Patent to teach or suggest the method for obtaining applicant's novel ingredient or the desirability for combining that ingredient with other detergent components. A combination is not obvious unless the art teaches the desirability of the combination. Obvious to try is not the standard of 35 U.S.C. §103. No one skilled in the art would be motivated by the '400 Patent to arrive at Applicant's compound. Disregard for the unobviousness of the results of obvious to try experiments disregards the "invention as a whole" concept of §103. Obviousness is not determined by the application of hindsight or retrospect, with the knowledge of the Applicant's discovery. Rather it is determined as of the time of the invention, based solely on the knowledge disclosed by the prior art as a whole. Therefore the rejection of claim 1 as amended under 35 U.S.C. § 103(a) as being unpatentable over Baillely et al. (U.S. Patent No. 5,773,400) should be withdrawn for the reason that Baillely et al. teaches away from or is at best silent regarding the instant invention as now claimed, and no one skilled in the art would be motivated to employ Applicant's ingredient consisting of an acidic polycarboxylate and a silicate, which is obtained by depositing of a solution of an acidic polycarboxylate on a silicate and drying step, or combining Applicant's ingredient with other typical detergent ingredients, and for the reason that Applicant discovered unexpected superior performance for Applicant's novel ingredient obtained according to the instant invention, even when their compositions were otherwise identical.

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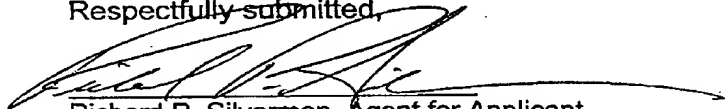
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The rejection of claims 2-15 as amended under 35 U.S.C. § 103(a) as being unpatentable over Bailley et al. (U.S. Patent No. 5,773,400) should be withdrawn for the reasons given in support of claim 1, from which they depend.

The rejection of claims 23 and its dependencies claims 24, 26 and 27, as amended under 35 U.S.C. § 103(a) as being unpatentable over Bailley et al. (U.S. Patent No. 5,773,400) should be withdrawn for the reasons given in support of claim 1, and for the reason that nowhere in the '400 Patent is there disclosed a process for using a pulverulent laundry and cleaning detergent ingredient which consists of depositing a solution of an acidic polycarboxylate onto an alkaline silicate and drying.

It is respectfully submitted that, in view of the above remarks the objection to the IDS and the claim rejections under 35 U.S.C. §103 should be withdrawn and that this application is in a condition for an allowance of all pending claims. Accordingly, favorable reconsideration and an allowance of all pending claims are courteously solicited.

Respectfully submitted,



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